BLS-to-ADF Transition

- More detail can be found on my web page:
  - http://www-d0.fnal.gov/~alstone/D0Work/L1CAL/l1cal.html
- 1.5 hour Mtg on Mon. May 24th
  - Marvin Johnson, Dan Edmunds, John Anderson, Alan Stone
  - Sketch out details for a BLS-to-ADF transition system
    - Cables, connectors and patch panel
  - Address concerns raised by Dan and others:
    - Maintain signal integrity of current system - low noise, no crosstalk or reflection
      - Degrading raw BLS signals eliminates gain of new trigger system
    - Connect the existing low density BLS cables to the high density input of the new ADF crates
    - Proposed 16-1 cable adaptor assembly did not match the impedance of existing cables - no tests had been done for:
      - Reflection, crosstalk, noise, common mode rejection?

Action Items from May 24th Mtg

- Recommend using:
  - Pleated foil cables which have better impedance matching
  - Commercially available paddle cards with ERNI connectors which mate to the ADF backplane. Each paddle board would have 2 or 4 connectors (TBD) which would mate to the connectors of the pleated foil cables
- Need to do:
  - Pin layout for every signal and ground, input and output
  - Mechanical layout of the patch panel and rack space
- With specifications for pin layout, cables, connectors, space and size constraints, approach outside company for quote
- The goal is end of summer for full system
  - 13 week shutdown is scheduled to begin Aug 31st

Progress So Far

- John Fogelsong and Johnny Green have been assigned to help work with us.
  - John F. is working on the pin layout and a schematic for the patch panel
    - He has set up a web page for the L1 Cal Trigger Patch Panel, so we can all follow his progress
      - Includes links to specifications for cables and connectors
  - Johnny G. will interface with outside companies in specifications and quotes
- Will not speculate on cost, or feasibility of doing in-house at UIC or elsewhere at this time.
- Dan is continually providing input and answering important questions